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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,296	10/03/2003	Chad R. Overton	72940/02-364	3502

7590 02/17/2006		EXAMINER
Fellers, Snider, Blankenship, Bailey & Tippens		SCHLIE, PAUL W
Bank One Tower		
Suite 1700	ART UNIT	PAPER NUMBER
100 North Broadway	2186	
Oklahoma City, OK 73102-8820		

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/678,296	OVERTON ET AL.
	Examiner	Art Unit	
	Paul W. Schlie	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/8/06*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 October 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-16 have been reexamined in light of the applicant's arguments.

Response to Arguments

2.   Applicant's arguments filed 2/08/06 have been fully considered but they are not

persuasive. As regardless of the phrasing utilized to describe the claimed limitations

with specific respect to claim 1, as the cited limitation "wherein the execution of a

selected virtual function by the virtual machine causes the processor to execute a

corresponding native function, and wherein the corresponding native function is

executed to evaluate the concurrent execution of a at least one other native function" is

interpreted to mean: the evaluation of a function by a virtual machine (i.e. software

interpreter process) results in the evaluation (i.e. execution) of a corresponding native

(i.e. physical machine) code function (which is what all virtual -machine/language

interpreters inherently do), may itself result in the concurrent evaluation of at least one

other (i.e. different) native (i.e. physical machine) code function (i.e. the native function

code function may itself invoke/call another potentially concurrent [within another

software process or physical machine] native function [for example a "remote procedure

call" threw potentially a "foreign function interface"]), all cited limitations are considered

to be clearly anticipated and/or obvious to one of ordinary skill in the art as previously

reviewed.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griesemer (6,021,273) in further in view of Uchida (5,210,876).

As per claims 1 and 10, Griesemer teaches a native/host machine architecture independent virtual machine implementation which stores native functions in a format determined by the native hardware architecture of the host processor, upon which a virtual machine is emulated which executes virtual functions in a standardized format determined irrespective of the hardware architecture of the processor, wherein the execution of a selected virtual function by the emulated virtual machine causes the processor to execute a corresponding native function (see figure 11, and columns 3-4 lines 62-19); but does not explicitly teach that the execution of such a native function may itself indirectly invoke a corresponding logically concurrent execution of select different native function. Uchida teaches that such a native compiled function may be called indirectly by an interpreted virtual machine utilizing a native foreign compiled function call interface (see figures 3 and 8, and column 1 lines 20-35). It would be obvious to one of ordinary skill in the art to combine the two to enable a native/host architecture independent virtual machine interpreter to indirectly logically concurrently invoke a specified native foreign function upon the evaluation of a virtual machine instruction coded in a standardized format, for the benefit of being able leverage the performance efficiency of native compiled function execution within an otherwise interpreted virtual machine emulation environment.

As per claims 2-9 and 11-16, which are all correspondingly dependant on either claims 1 or 10, Griesemer further teaches a symbol and dispatch table which may map corresponding virtual functions to corresponding native functions for either the purpose of their reference and/or evaluation (see figures 5-6, 10-11,and column 2 lines 50-63); but does not explicitly teach that an indirectly invoked native function may return a data value as a result of it's correspondingly invoked independently specified behavior. Uchida teaches that a native compiled function may be called indirectly by an interpreted virtual machine utilizing a native foreign compiled function call interface (gate call) and return a correspondingly computed value (see figures 3 and 8, and column 1 lines 20-23). It is considered obvious to one of ordinary skill in the art to combine two, for the benefit of enabling the utilization of native functions for behaviors and/or computations which require the return of values to the virtual machine context for their subsequent use; and is further considered as being obvious to one of ordinary skill in the art that, as virtual machine may be specified as having any arbitrary conventional machine architectural feature and/or capability, any such particular feature and/or capability is not considered novel unto itself; nor is a virtual machine's ability to invoke any particular behavior as may result from any correspondingly conventionally specified and suitably compiled program, or logically reside within any particular device which may host a conventional processor, considered novel.

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765, or whose email address is [paul.schlie@uspto.gov]. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PIERRE BATAILLE
PRIMARY EXAMINER

2\15\06